

PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|--|--|---|
| Applicant's or agent's file reference 5814-56WO | FOR FURTHER ACTION | see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |
| International application No. PCT/US02/39935 | International filing date (<i>day/month/year</i>) 13 December 2002 (13.12.2002) | (Earliest) Priority Date (<i>day/month/year</i>) 03 January 2002 (03.01.2002) |
| Applicant PRECISION COMBUSTION INC. | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of ____ sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. Certain claims were found unsearchable (See Box I).

3. Unity of invention is lacking (See Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 1



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures

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International application No.

PCT/US02/39954

FILE COPY**Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)**

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

The present invention is a retainer and a method of manufacture therefor that can incorporate the ability to condition the flow of a fluid therethrough. The retainer (10) defines a bearing surface for buttressing an element having a fluid flowing therethrough. The retainer (10) comprises a plurality of members (16) that if given the proper aspect ratio can condition the flow of a fluid.

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International application No.
PCT/US02/39935 **FILE COPY**

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F01N 3/28; B01D 53/34
US CL : 422/171, 177, 180; 55/501

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 422/171, 177, 179, 180; 55/501, 494, 496

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | US 3,556,735 A (EPELMAN) 19 January 1971, see entire document. | 1-6, 13-19 |
| --- | | ----- |
| Y | | 7-12, 20-22, 24 |
| X | US 3,913,890 A (LANKEMAU et al) 21 October 1975, see entire document. | 1-6 |
| --- | | ----- |
| Y | | 7-12, 20-21 |
| X | US 4,099,944 A (DAVIS) 11 July 1978, see entire document. | 1, 2, 4, 6-7 |
| --- | | ----- |
| Y | | 3, 5-12, 20-21 |
| X | US 4,161,509 A (NOWAK) 17 July 1979, see entire document. | 1-6 |
| --- | | ----- |
| Y | | 7-22, 24 |

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|--------------------------|---|--------------------------|--|
| <input type="checkbox"/> | Further documents are listed in the continuation of Box C. | <input type="checkbox"/> | See patent family annex. |
| * | Special categories of cited documents: | "T" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" | document defining the general state of the art which is not considered to be of particular relevance | "X" | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "E" | earlier application or patent published on or after the international filing date | "Y" | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" | document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" | document member of the same patent family |
| "O" | document referring to an oral disclosure, use, exhibition or other means | | |
| "P" | document published prior to the international filing date but later than the priority date claimed | | |

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|--|---|
| Date of the actual completion of the international search 03 February 2003 (03.02.2003) | Date of mailing of the international search report |
| Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230 | Authorized officer Hien Tran Telephone No. 308-0661 |

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

EAST

Search terms: retainer, catalyst reactor, support, bearing surface, abutment surface, screen